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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,421

03/11/2005

Katsuyuki Tanaka

HOK-0243

1262

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08/16/2006

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EXAMINER

CYGAN, MICHAEL T

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/506,421

Applicant(s)

TANAKA ET AL.

Examiner

Michael Cygan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received. ✓

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 30 June 2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonmati (US 4,230,464) in view of Modell (US 3,455,817). Bonmati teaches a

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recirculation gas chromatograph comprising a gas separation column ([1], see column 1 lines 23-35), air pump [6], buffer tank [11] having an end (near [21]) opened to the outside opposite from the end connected to the pump, gas purifier [17], and flow sensor upstream of the filter (column 4 lines 45-57). Bonmati fails to teach the details of the chromatographic sample entry and detector units.

Modell teaches a recirculation gas chromatograph having a port [14] for sample [10] entry downstream of filtered carrier gas [12], and a detector [20] downstream of the column [16]. It would have been obvious to one having ordinary skill in the art to use a sample injector and detector as taught by Modell in the invention taught by Bonmati to inject and detect the sample composition, since the introduction of a sample to be analyzed, and the detector for providing the analysis are important, if not necessary, to gas chromatographic analysis, and Modell's positioning is taught to be useful for recirculation gas chromatographic systems such as Bonmati's.

Claims 2, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonmati (US 4,230,464) in view of Modell (US 3,455,817) as applied to claim 1, further in view of Shoemake (US 3,624,986). The claimed invention is considered to be taught except for the use of a sensor for analyzing injections, a flow sensor at the detector, and a controller for increasing flow amount according to a predetermined pattern. Shoemake teaches a flow controller for a gas chromatograph comprising a sensor for analyzing injections (column 3 lines 17-26), a flow sensor at the detector (column 3 lines 60-74), and a controller for increasing flow amount according to a

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predetermined pattern (column 3 lines 34-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use, as taught by Shoemake in the invention of Bonmati, an injection sensor (to better manage the timing recordation that is essential for determining the retention time of each component), detector flow sensor (to compensate for flow rate variations to allow quantitative analysis of each component), and controller (for better resolution as set forth at column 3 lines 34-41).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonmati (US 4,230,464) in view of Modell (US 3,455,817) as applied to claim 1, further in view of applicant's admitted prior art (specification page 2 lines 15-19) and in view of "Principles of Instrumental Analysis" (Skoog). The claimed invention is considered to be taught except for application to breath measurement and memory storage of retention times. Skoog teaches that gas chromatographs may be automated with microprocessors comparing actual retention times and areas to expected retention times and areas for likely sample constituents, see page 751 right column through page 753. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a memory for determining the constituents by their retention times, since Skoog teaches that this common feature allows operation of the chromatograph with "little or no human control." With respect to the application toward exhalation measurement, applicant's specification at page 2 lines 15-19 teaches that such application has been previously known to be desirable.

With respect to the means in claim 9, the means is interpreted from page 14, last paragraph, to comprise any correction of the retention times using multiple peaks. Skoog teaches such correction of retention times using multiple peaks, see page 751 1st column. It would have been obvious to one having ordinary skill in the art at the time the invention was made to correct retention times using multiple peak data as taught by Skoog in the invention taught by Bonmati to better characterize and quantify the individual gas constituents.

Conclusion

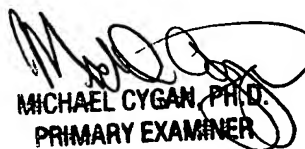
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MICHAEL CYGAN, PH.D.
PRIMARY EXAMINER